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# *Astragalus darwinianus* (Leguminosae, Galegeae), a New Species from Argentina

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**ABSTRACT.** *Astragalus darwinianus* Gómez-Sosa, a new endemic species (Leguminosae, Galegeae) from the south of Argentina, is described, illustrated, and compared with the morphologically similar *A. patagonicus* (Philippi) Spegazzini based on vegetative characteristics and with *A. mendocinus* Gómez-Sosa based on fruit morphology. The new entity has decumbent stems, racemes that are (2)3- to 4-flowered, and legumes that are unilocular, incurved, and incanous pubescent.

**RESUMEN.** *Astragalus darwinianus* Gómez-Sosa, una nueva especie endémica del sur de Argentina, se describe, ilustra y se compara con *A. patagonicus* (Philippi) Spegazzini con las que comparte características vegetativas y con *A. mendocinus* Gómez-Sosa similares por la morfología del fruto. El nuevo ejemplar tiene tallos decumbentes, racimos con (2)3–4 flores, legumbre unilocular, incurva e incano pubescente.

**Key words:** Argentina, *Astragalus*, Galegeae, Leguminosae, Patagonia.

The genus *Astragalus* L. (Leguminosae, Galegeae) in South America is represented by approximately 110 species found in Ecuador, Peru, Bolivia, Chile, Uruguay, and Argentina, as presently revised (Gómez-Sosa, 1979, 1999). In Argentina there are about 70 species from the north, in the province of Jujuy, to the south in the province of Tierra del Fuego. It inhabits the western areas from the Andean mountains at about 4700 m altitude, extending to the southeast along the Atlantic coast in Patagonia (Gómez-Sosa, 2005). The contribution presented here is relevant to the Patagonian region with 29 species (Gómez-Sosa, 1984).

***Astragalus darwinianus*** Gómez-Sosa, sp. nov.

**TYPE:** Argentina. Santa Cruz, Dpto. Lago Argentino: 30 km E of Calafate, near Santa Cruz river, 190 m, 50°15'47"S, 071°53'10"W, 21 Dec. 2002, *D. Benjamini 911* (holotype, SI; isotypes, CTES, MO). Figure 1.

Herba prostrata, caulibus decumbentibus; stipulae amplexicaules, bidentatae, glabrae, ciliatae; folia 4–6 cm longa, petiolo 2–3 cm incluso; foliola 9 ad 11, linearia vel elliptica, 8–10 × 1.5–2.5 mm, supra glabra, subtus alba strigoso-pubescentia, in rachidi 0.8 cm distantia, conduplicata, apice obtuso; racemi laxi (2)3- ad 4-flori; pedunculi quam folia aequilongi; flores (0.5–)0.7–1 cm pedicellati, erecti ad ascendentes, calyx campanulatus, 2-bracteolatus; vexillum 1.25 × 1 cm; legumen immaturum, ca. 3 × 0.25 cm, fusiforme, lunate incurvum, uniloculare, papyraceum, apiculatum, marginibus fusiformibus, incane pubescens, lateraliter compressum et lineare in transectione.

Prostrate caulescent herb; stems 2–4 cm; stipules membranous, connate and amplexicaulous into a shortly bidentate sheath, glabrous, ciliate. Leaves 4–6 cm, including petiole 2–3 cm; leaflets 9 to 11, distant by nearly 0.8 cm on the rachis, in outline linear or elliptic, obtuse, 8–10 × 1.5–2.5 mm, glabrous above, white strigose-pubescent below. Racemes loosely (2)3- to 4-flowered; peduncles 4–5.5(–6) cm, decumbent in age; bracts 2.5 mm, subulate, glabrous, ciliolate; bracteoles 2, 1.2 mm. Flowers blue-violet to pale blue, pedicels (0.5–)0.7–1 cm, erect to ascending; calyx 7.5 cm, canescent, tube campanulate 4 mm, teeth subulate 3.5 mm; banner 1.25 × 1 cm, erect, obtuse; wings 1.25 × 0.25 cm, with the claws included, narrowly rectangular; keel 1.15 cm; ovary substipitate, pubescent, style glabrous, stigma capitate; ovules ca. 28. Pod immature, canescent, ca. 3 × 0.25 cm, fusiform, papery, incurved throughout for ca. 1/6–1/3 of a circle, the stipe concealed in the hypanthial cup, unilocular, not inflexed, papery, carinate dorsally, laterally compressed and linear in cross section.

**Etymology.** This species is dedicated to Charles Darwin (1809–1882) who, at 22 years of age, was invited by Captain R. FitzRoy to travel on the *Beagle* around the world as the naturalist on the voyage. Darwin's longest stay on land was in the region around and south of the La Plata River, Brazil, Uruguay, and Argentina (this included Patagonia and Tierra del Fuego), where he explored for 20 months and six days, from 26 July 1832 to 2 April 1834. On 16 April 1834, along the coast of Argentine Patagonia, the *Beagle*



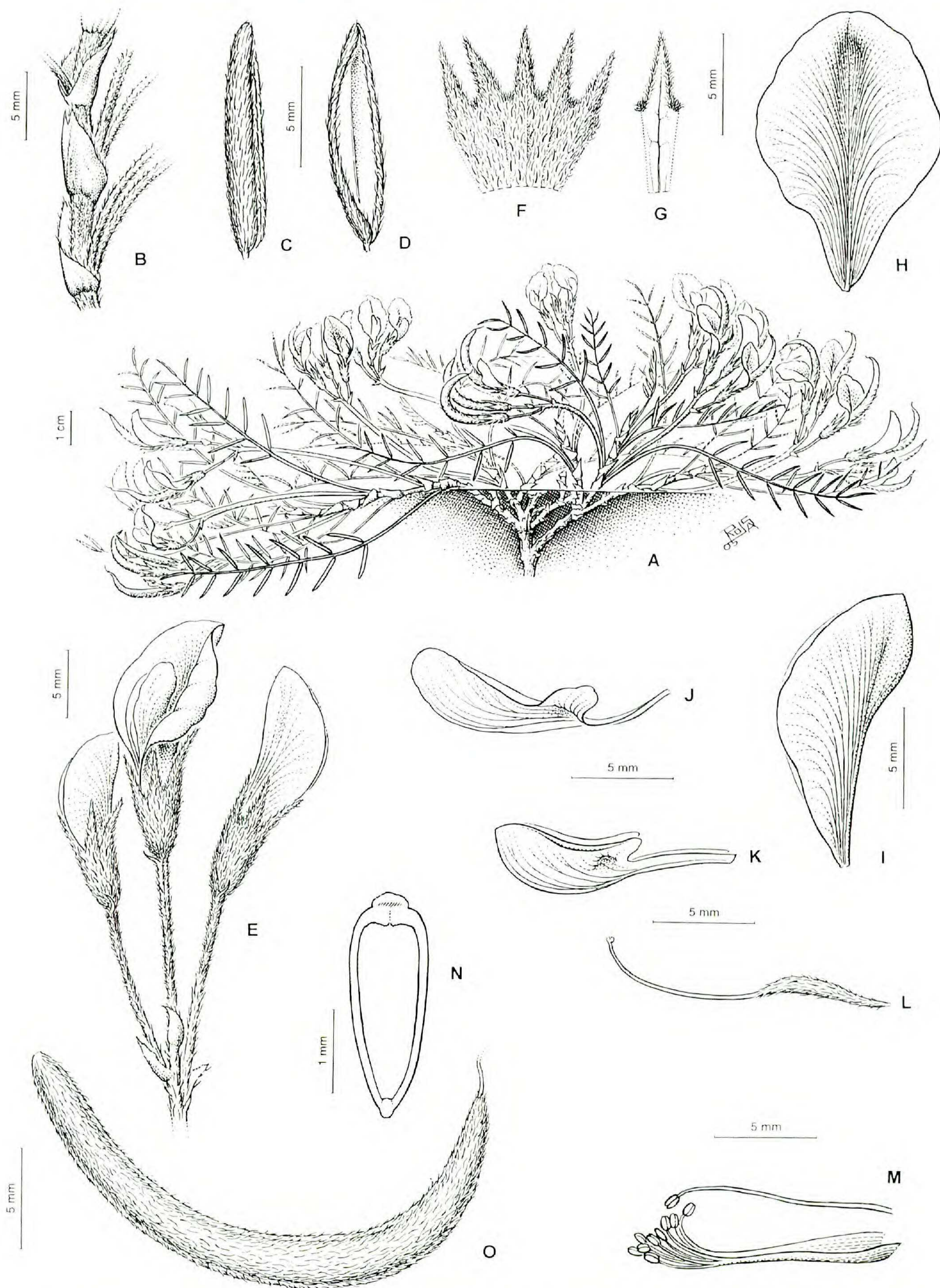


Figure 1. *Astragalus darwinianus* Gómez-Sosa. —A. Plant habit. —B. Stipules. —C. Leaflets, conduplicate, abaxial view. —D. Leaflets, conduplicate, adaxial view. —E. Inflorescence. —F. Calyx. —G. Teeth, internal view. —H. Banner, internal view. —I. Banner, lateral view. —J. Wing. —K. Keel. —L. Ovary. —M. Androecium. —N. Fruit, lateral view. —O. Fruit, transection. Based on *Benjamini 911* (holotype, SI).



Table 1. Comparison of *Astragalus darwinianus* and morphologically similar species.

	<i>A. darwinianus</i>	<i>A. patagonicus</i>	<i>A. mendocinus</i>
Stem length (cm)	2–4, decumbent	1–15, decumbent	8–12, procumbent
Leaf length (cm)	4–6	(3–)4–10(–13)	5.5–7
Leaflet number	9 to 11	(7)9 to 11(13)	8 to 10
Flowers, number per raceme	(2)3 to 4	4 to 6(8)	4 to 6
Banner	obtuse	emarginate	emarginate
Pedicel length (cm)	(0.5–)0.7–1	0.1–0.15	0.25–0.3
Legume	unilocular (immature), 3 × 0.25 cm, papery valves, canescent, incurved throughout nearly 1/6–1/3 of a circle	unilocular, 2.5–3 × 1–1.25 cm, coriaceous valves, mottled, oblong to ovoid	sub-bilocular, 4 × 0.35 cm, papery valves, glabrous, transversely venulose incurved throughout nearly 3/4 of a circle.

anchored at the mouth of the Santa Cruz River and, on 18 April, an excursion started up the Santa Cruz River “as far as time would allow” toward the Andes (Parodiz, 1981: 35). Darwin was the first botanist to explore this area, according to D. M. Moore in his contribution discussing the early exploration of Austral Patagonia (Boelcke et al., 1985).

*Habitat.* *Astragalus darwinianus* is known from only the type specimen. It occurs in the south of the Argentinian Patagonian region near the Santa Cruz River, growing on sand with stones. In this area the Patagonian vegetation is named “santacruzense”; the phytogeographic area is known as the Central District or “Erial Patagónico” (Correa, 1998: 135–138). *Astragalus darwinianus* may be found among communities of nanophanerophytes. Plant associates include: *Petunia patagonica* (Spegazzini) Millan, *Nassauvia glomerulosa* D. Don, *Acaena platyacantha* Spegazzini, *Adesmia ameghinoi* Spegazzini, and *Astragalus patagonicus* (Philippi) Spegazzini and *A. palenae* (Philippi) Reiche.

*Affinities.* In the Argentinian Patagonia flora, *Astragalus darwinianus* appears vegetatively similar to *A. patagonicus* (Johnston, 1947; Gómez-Sosa, 1979, with map included). Its incurved pod resembles *A. mendocinus* Gómez-Sosa (Gómez-Sosa, 1988). The new species is markedly set apart from both of these species by the number of flowers per raceme and fruit morphology (Table 1).

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collector of the South American butterfly *Lycaenidae* (Lepidoptera). He has a particular interest in plants of *Astragalus* and their identification to species, because the genus *Pseudolucia* Nabokov oviposits and develops only on fruits of certain species of *Astragalus*. I am also grateful to Michael Sanderson and Jeffrey White for critical review of the present work, to Victoria C. Hollowell for offering careful suggestions toward its revision, to Francisco Rojas for the drawing, and to Jan Saunders for reviewing the English version.

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